## REMARKS

Applicants respectfully request the Examiner to reconsider the present application in view of the following remarks.

***Amendments to the Claims***

Upon entry of the present amendment, claims 1-8 will be pending in the present application. Claim 8 has been added.

No new matter has been added by way of this new claim because the new claim is supported by the present specification. New claim 8 is supported by the present specification, *inter alia*, at page 7, line 7.

Based upon the above considerations, entry of the present amendment is respectfully requested.

In view of the following remarks, Applicants respectfully request that the Examiner withdraw all rejections and allow the currently pending claims.

***Issues under 35 U.S.C. § 103(a)***

Claims 1-7 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hashimoto et al. '388 (U.S. 6,037,388) in view of Nishimura et al. '641 (U.S. 5,281,641) when taken with Wakumoto et al. '061 (U.S. 5,122,061) (see pages 2-4 of the Office Action). Applicants respectfully traverse, and reconsideration and withdrawal of these rejections are respectfully requested.

*The Present Invention*

The polymerization initiator composition, which is the subject matter of claim 1 of the present application, comprises:

(i) 100 parts by weight of (A) an organic boron compound,

(ii) 5 to 40 parts by weight of (B) an aprotic solvent, and

(iii) 0.2 to 5 parts by weight of (C) an alcohol.

The polymerization initiator composition is characterized in that it comprises 0.2 to 5 parts by weight of (C) an alcohol as described above.

That is, the organic boron compound (A) reacts with the alcohol or the aprotic solvent such as water to decompose and thereby loses its polymerization activity. Therefore, one of ordinary skill in the art would not use the organic boron compound in combination with the alcohol. However, the present specification at page 6, line 20 to page 7, line 22 recites:

> Surprisingly, the alcohol (C) in the initiator composition of the present invention suppresses heat generation (ignition) without reducing polymerization activity in the presence of the aprotic solvent (B) when it is added in a specific small amount.
>
> ...
>
> The content of the alcohol (C) in the polymerization initiator composition of the present invention must be 0.2 to 5 parts by weight, preferably 0.3 to 4.5 parts by weight, most preferably 0.5 to 4 parts by weight based on 100 parts by weight of the organic boron compound (A). When the content of the alcohol (C) is lower than 0.2 part by weight based on 100 parts by weight of the organic boron compound (A), its effect of suppressing heat generation (ignition) is not fully obtained. When the content of the alcohol (C) is higher than 5 parts by weight based on 100 parts by weight of the organic boron compound (A), it tends to reduce the polymerizability of the polymerization initiator composition.

This disclosure was totally unknown and unpredictable to one of ordinary skill in the art.

*Distinctions over the Cited Prior Art*

Hashimoto et al. '388 disclose a polymerization initiator composition which comprises (A) 100 parts by weight of an organic boron compound and (B) 10 to 150 parts by weight of an aprotic solvent (see col. 2, lines 15-21).

However, as the Examiner admits, Hashimoto et al. '388 fail to teach the use of 0.2 to 5 parts by weight of an alcohol.

Nishimura et al. '641 disclose a dental or surgical adhesive filler containing (a) a polymerizable acrylic acid or methacrylic acid derivative, (b) a vinyl polymer powder and (c) an organic boron compound as a curing agent (see col. 1, lines 63-66 and col. 2, lines 7-10).

Nishimura et al. '641 merely disclose an adhesive filler and not a polymerization initiator composition as described above. Therefore, Nishimura et al. '641 do not teach the suppression of heat generation by the initiator composition without reducing polymerization activity.

Nishimura et al. '641 disclose a polar organic compound, including an alcohol, as "other components" and that "the polar organic compound generally shows an effect that the curing rate is decreased to increase the adhesion strength" (see col. 3, lines 14-23). Thus, Nishimura et al. '641 do not teach that the alcohol suppresses the heat generation without reducing polymerization activity in the presence of the aprotic solvent when it is added in a specific small amount, i.e., 0.5 to 5 parts by weight.

Wakumoto et al. '061 disclose a curable adhesive composition comprising in combination (i) a solution containing a radical polymerizable (meth)acrylate monomer and (ii) a curable composition comprising (P) a monofunctional (meth)acrylate monomer, (Q) a polyfunctional (meth)acrylate monomer, (R) a (meth)acrylate monomer containing an acid group, and (S) a trialkylboron or an oxide thereof (see col. 1, lines 48-63).

Solvents, for example, water and alcohols such as ethanol, propanol, and butanol, are disclosed at col. 6, lines 50-52. However, these solvents are used to prepare the solution containing a radical polymerizable (meth)acrylate monomer (i) as understood from col. 6, lines 48-50. The solution does not contain the above component (S).

As for the curable composition (ii), optional components other than the above components (P), (Q), (R), and (S) are disclosed in col. 15, lines 6-19, but solvents are not disclosed in that section.

Therefore, Wakumoto et al. '061 do not disclose use of any solvent for the trialkylboron or an oxide thereof as the component (S).

It is clear from the difficulty in achieving the invention and the excellent unexpected improved properties associated therewith that the subject matter of claim 1 of the present application that is unobvious over Hashimoto et al. '388, in view of Nishimura et al. '641, when taken with Wakumoto et al. '061. Therefore, the subject matter of claims 2-7, which depend from claim 1, is also unobvious over these cited references.

***Newly Proposed Claim 8***

Applicants have newly proposed claim 8 in an effort to further define the scope of protection owed to Applicants. Applicants respectfully submit that claim 8 is allowable for the reasons given above. As such, Applicants respectfully assert that claim 8 clearly defines over the prior art of record, and an early indication to this effect is earnestly solicited.

## CONCLUSION

A full and complete response has been made to all issues as cited in the Office Action. Applicants have taken substantial steps in efforts to advance prosecution of the present application. Thus, Applicants respectfully request that a timely Notice of Allowance issue for the present case.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Chad M. Rink (Reg. No. 58,258) at the telephone number of the undersigned below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

By _____ (Reg No 40,066)
Marc S. Weiner
Registration No.: 32,181
BIRCH, STEWART, KOLASCH & BIRCH, LLP
8110 Gatehouse Road, Suite 100 East
P.O. Box 747
Falls Church, Virginia 22040-0747
(703) 205-8000
Attorney for Applicants